IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Attorney Docket No.: AT9-98-024

In re Application of:	§
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MADDALOZZO ET AL.	§
	§
Serial No.: **09/071,189**	§
	§
Filed: **May 1, 1998**	§
	§
For: **METHOD AND SYSTEM FOR TOUCH SCREEN KEYBOARD AND DISPLAY SPACE SHARING**	§

Examiner: **Shankar, V.**

Art Unit: **2673**

APPEAL BRIEF

Commissioner for Patents
Mail Stop Appeal Briefs – Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This present Brief is submitted in triplicate in support of the Appeal in the above-identified application.

REAL PARTY IN INTEREST

As evidenced by the Assignment set forth at Reel 9137 IBM Corporation, Frame 0424, the present application is assigned to International Business Machines Corporation, the real party in interest of the present application.

RELATED APPEALS AND INTERFERENCES

There are no Appeals or Interferences known to Appellant, the Appellant's legal representative, or assignee, which directly affect or would be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claims 1-21 stand finally rejected by the Examiner as noted in the Advisory Action dated March 26, 2003.

STATUS OF AMENDMENTS

No amendment has been submitted subsequent to the final rejection.

SUMMARY OF THE INVENTION

As set forth in the present specification at page 3, lines 17 et. sec., the present inventions directed to a method and system for increased portable computer compactness by providing a display which is partitioned into a touch-sensitive input area and a display area wherein data input at the touch-sensitive input area may be simultaneously displayed in the display area in response to a particular user input. A test is performed to determine if a user's hands are positioned at the touch-sensitive input display area and in response to such detection a touch-sensitive pad is thereafter graphically displayed at the touch-sensitive input area within the display screen so that the user may enter data which may simultaneously displayed in the display area.

As described in the present specification at page 11, line 22 et. sec., the preferred embodiment of the present invention merges the display area and keyboard input area utilizing touch screen technology such that when a user places his or her hands over the bottom half or two thirds of the touch-screen display, a translucent keyboard appears under his or her fingers. The current text or graphics displayed in the touch-screen display will still be seen through the keyboard; however, when the user touches the graphically displayed keyboard "keys," key board is input is reflected on to the screen immediately behind the graphically displayed keyboard.

As described in the present specification at page 12, line 8, **FIG. 4** depicts a pictorial representation of a document **82** displayed within a graphical user interface window **83** in a normal display mode, in accordance with a preferred embodiment of the present invention. The graphical user interface, as described previously, is a type of computer interface composed of a visual metaphor reflecting a real-world scene, often of a desktop. Within this scene are icons, representing actual objects, that the user may access and manipulate with a pointing device. Window **80** includes specific icons, which when manipulated by a user via a pointing device, allow a user to scroll up or down through document **82**. For example, down-arrow **96** allows a user to scroll downward, while up-arrow **94** allows a user to scroll upward through document **82**.

Down-arrow **96**, up-arrow **94** and slider **90** are positioned within scroll bar **92**. Scroll bar **92** is a graphical device that can be utilized to change a user's viewpoint of a list or data file. The user alters the view by sliding slider **90** up or down in the scroll area or by pressing one of the scroll arrows (i.e., down-arrow **96** or up-arrow **94**), which causes the view to scroll up or down in the window area adjacent the scroll bar. Window **83** additionally includes an area in which "M," "K," and "D" graphical buttons are located (i.e., "M" button **84**, "K" button **86**, and "D" button **88**). As described herein, "M" button **84** initiates a "mouse" mode, "K" button **86** initiates a "keyboard"

mode, and "D" button **88** initiates a normal display mode. As indicated by the shaded "D" button **88**, window **83** of **FIG. 4** depicts a normal display mode.

FIG. 5 illustrates a pictorial representation of document **82** displayed within graphical user interface window **83** in a mouse mode, in accordance with a preferred embodiment of the present invention. Cursor **120** indicates a position within document **82** from which a user might begin editing document **82**. The document displayed within window **83** of **FIG. 5** is in a "mouse mode, as indicated by shaded "M" button **84**. The user may manipulate document **82** utilizing a pointing device such as a mouse. Because the graphical user interface depicted in **FIG. 5** is implemented on a touch screen device, the user merely places an index finger at mouse pointer **89** and moves the mouse pointer toward the desired area. Movement of the mouse pointer is indicated in **FIG. 5** by curved lines **85**. Circle **87** indicates the actual position of a user's finger on the touch screen as the mouse pointer **89** is moved toward cursor **120**.

FIG. 6 depicts a pictorial representation of graphical user interface window **83** displayed in a keyboard mode, in accordance with a preferred embodiment of the present invention. **FIG. 7** illustrates a pictorial representation of graphical user interface window **83** displayed in a keyboard mode following manipulation of document **82** by keyboard **110**, in accordance with a preferred embodiment of the present invention. The keyboard mode is indicated by shaded "K" button **86**. When the graphical user interface window functions in a keyboard mode, a user can place his or her hands over the bottom half or two-thirds of display screen **80**. Touch screen technology detects the presence of the user's hands in these areas.

Thus, when the user's hands are detected, a translucent or transparent keyboard **110** appears beneath the user's fingers on display screen **80**. Although not depicted specifically in **FIG. 6** and **FIG. 7**, current text, graphics or other documents will still be visible through the keyboard. When

the user touches the "keys" displayed on display screen **83**, keyboard input is reflected onto the screen beneath transparent keyboard **110**. Those skilled in the art will appreciate that the circles depicted on transparent keyboard **110** indicate where a user's hands can be positioned to manipulate the keyboard. For example, a user's left hand fingers may be positioned respectively on the "A", "S", "D," "F" and space bar keys, while a user's right hand fingers may be positioned at the ";", "L", "K", "J" and space bar keys. The larger circles depicted in **FIG. 6** and **FIG. 7** indicate the position of the user's palms. If the user takes his or hands away from the touch-screen surface, the projected keyboard fades away. If a user's hand is then detected at the touch-screen, the keyboard reappears. This hide and display action continues until an option other than a "K" mode is selected.

Because the user must also be able to see the actions associated with his or her typing, a smaller "active" window **100**, is displayed to indicate the actual typing taking place. Window **100** includes a scroll bar **102** having a slider **106**, an up-arrow **108**, and a down-arrow **104** which functions similar to the scroll bar, slider and arrows associated with window **83**. Of course, as indicated previously, the actions performed via keyboard input are simultaneously displayed in the actual text that resides "beneath" keyboard **110**, as well as in window **100**. Window **100** thus includes a document **101**, which is in essence, a smaller version of document **82**.

ISSUES

Is the Examiner's rejection of Claims 1-21 under the 35 year see section 102 (e) as being anticipated by your Yoshinobu, et al, United States Patent Number 5, 777,605 well founded?

GROUPING OF THE CLAIMS

For purposes of this Appeal claims 1-21 stand or fall together as a single group.

ARGUMENT

The examiner has rejected Claims 1-21 under 35 USC section 102(e) as being anticipated by Yoshinobu, et al, United States Patent Number 5,777,605. That rejection is not well founded and it should be reversed.

The method and system of the present invention are directed to a technique for supporting increased portable computer compactness by displaying data within a display screen and partitioning that display screen into a touch-sensitive input area and a display area. Thereafter, the presence of the user's hands at the touch-sensitive area is detected and a touch-sensitive key pad is graphically displayed within the touch-sensitive area in response to the detection of the user's hands at that position, so that the user may utilized the touch-sensitive key pad to enter data to be displayed within the display area. This language is expressly set forth within the claims of the present application and Applicant does not believe Yoshinobu, et al anticipates, shows or suggests in any way such an invention.

As noted during the prosecution of this application, Applicant urges the Board to consider the tablet 51 of Yoshinobu, et al is, according the disclosure therein, entirely touch-sensitive and thus, the display screen is not partitioned into a touch-sensitive area and display area and expressly set forth within the claims of the present application.

Further Yoshinobu, et al teach the display of a touch-sensitive key board in response to selection of key board icon 107, as described at column 8, lines 1-3 of Yoshinobu, et al or, as described at column 8, line 37 et. sec., a keyboard may be displayed in response to movement of "pointing cursor 101 to an area of the post card image in which text is to be written. If the above-described area is selected, and editor cursor 302 is displayed on the screen (FIG. 13) in edition to pointing cursor 101, and a virtual keyboard 301 (FIG. 13) is also displayed in a predetermined area of the screen. A text is then input by properly selecting key icons of the virtual key board 301 using pointing cursor 101."

Thus, it should be noted that, even if the examiner's apparently untenable position of specifying the upper portion of the tablet as a display area and the lower portion of the tablet display as a touch-sensitive portion, the teachings of Yoshinobu, et al are entirely contrary to the invention expressly set forth with in the claims of the present application.

Keyboard 301 depicted within Figure 13 is, according the express language of Yoshinobu, et al, either displayed as a result of the selection of keyboard icon 107, or as a result of the position of pointing cursor 101 within the display area. Thus, it should be considered beyond cavil that Yoshinobu, et al fails to anticipate, show or suggest in any way the graphic display of a touch-sensitive pad within a touch-sensitive area in response to a detection of the user's hands at that touch-sensitive area.
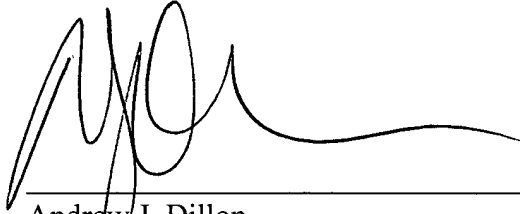
This is true as Yoshinobu, et al clearly teaches the display of keyboard in response to either selection of a particular icon or, in response to positioning of the pointing cursor in an area of the display which the examiner has clearly asserted is a display area. Thus, Yoshinobu, et al cannot be said to anticipate, show or suggest in any way either the partition of the display screen into a touch-sensitive area and display area, or the display of a touch-sensitive key pad within a touch-sensitive area in response to the detection of the user's hands within that touch-sensitive area, as expressly set forth within the claims of the present application.

As a consequence, Applicant urges that the examiner's rejection of claims 1-21 is not well founded and it should be reversed.

Please charge the fee of $320.00 for submission of a Brief in Support of Appeal to IBM Corporation Deposit Account No. 09-0447. No additional fee is believed to be necessary; however, in the event that any additional fee is required, please charge it to IBM Deposit Account Number 09-0447.

Respectfully submitted,

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ATTORNEY FOR APPLICANT

APPENDIX

1.   A method in a portable computer having a display screen for increasing portable computer compactness, said method comprising the steps of:

displaying data within said display screen; and

partitioning said display screen into a touch-sensitive input area and a display area, wherein data input at said touch-sensitive input area may be simultaneously displayed in said display area, in response to a particular user input;

detecting if a user's hands are positioned at said touch-sensitive input area; and

graphically displaying a touch-sensitive pad at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

2.   The method of claim 1 further comprising the steps of:

detecting if said user's hands are no longer positioned at said touch-sensitive input area; and

concealing said touch-sensitive pad from view, in response to detecting if said user's hands are no longer positioned at said touch-sensitive input area.

3.   The method of claim 2 wherein the step of graphically displaying a touch-sensitive pad at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area, further comprises the step of:

graphically displaying a touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

4.	The method of claim 3 wherein the step of graphically displaying a touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area, further comprises the step of:

graphically displaying a transparent touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

5.	The method of claim 4 further comprising the step of displaying data in said display area within said display screen, in response to user data entry at said transparent touch-sensitive keyboard.

6.	The method of claim 5 wherein the step of graphically displaying a touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area, further comprises the step of:

graphically displaying a touch-sensitive ergonomic keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

7.	The method of claim 6 further comprising the steps of:

analyzing physical characteristics associated with said user while said user is entering a particular sequence of data utilizing said touch-sensitive keyboard; and

in response to analyzing said physical characteristics, configuring said touch-sensitive keyboard such that the sensitivity of said touch-sensitive keyboard may be raised or lowered according to said physical characteristics associated with said user.

8.   A system in a portable computer having a display screen for increasing portable computer compactness, said system comprising:

means for displaying data within said display screen; and

means for partitioning said display screen into a touch-sensitive input area and a display area, wherein data input at said touch-sensitive input area may be simultaneously displayed in said display area, in response to a particular user input;

means for detecting if a user's hands are positioned at said touch-sensitive input area; and

means for graphically displaying a touch-sensitive pad at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

9.   The system of claim 8 further comprising:

means for detecting if said user's hands are no longer positioned at said touch-sensitive input area; and

means for concealing said touch-sensitive pad from view, in response to detecting if said user's hands are no longer positioned at said touch-sensitive input area.

10.   The system of claim 9 wherein said means for graphically displaying a touch-sensitive pad at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area, further comprises:

means for graphically displaying a touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

11.   The system of claim 10 wherein said means for graphically displaying a touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area, further comprises:

means for graphically displaying a transparent touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

12. The system of claim 11 further comprising means for displaying data in said display area within said display screen, in response to user data entry at said transparent touch-sensitive keyboard.

13. The system of claim 11 wherein said means for graphically displaying a touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area, further comprises:

means for graphically displaying a touch-sensitive ergonomic keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

14. The system of claim 12 further comprising:

means for analyzing physical characteristics associated with said user while said user is entering a particular sequence of data utilizing said touch-sensitive keyboard; and

means for configuring said touch-sensitive keyboard such that the sensitivity of said touch-sensitive keyboard may be raised or lowered according to said physical characteristics associated with said user, in response to analyzing said physical characteristics.

15. A program product residing in computer memory in a portable computer having a display screen for increasing portable computer compactness, said program product comprising:

instruction means residing in a computer memory for displaying data within said display screen; and

instruction means residing in a computer memory for partitioning said display screen into a touch-sensitive input area and a display area, wherein data input at said touch-sensitive input area may be simultaneously displayed in said display area, in response to a particular user input;

instruction means residing in a computer memory for detecting if a user's hands are positioned at said touch-sensitive input area; and

instruction means residing in a computer memory for graphically displaying a touch-sensitive pad at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

16.   The program product of claim 15 further comprising:

instruction means residing in a computer memory for detecting if said user's hands are no longer positioned at said touch-sensitive input area; and

instruction means residing in a computer memory for concealing said touch-sensitive pad from view, in response to detecting if said user's hands are no longer positioned at said touch-sensitive input area.

17.   The program product of claim 16 wherein said instruction means residing in a computer memory for graphically displaying a touch-sensitive pad at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area, further comprises:

instruction means residing in a computer memory for graphically displaying a touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

18.   The program product of claim 17 wherein said instruction means residing in a computer memory for graphically displaying a touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive

area, wherein a user may enter data that may be simultaneously displayed in said display area, further comprises:

instruction means residing in a computer memory for graphically displaying a transparent touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

19.   The program product of claim 18 further comprising instruction means residing in a computer memory for displaying data in said display area within said display screen, in response to user data entry at said transparent touch-sensitive keyboard.

20.   The program product of claim 19 wherein said instruction means residing in a computer memory for graphically displaying a touch-sensitive keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area, further comprises:

instruction means residing in a computer memory for graphically displaying a touch-sensitive ergonomic keyboard at said touch-sensitive input area within said display screen, in response to detecting a user's hands positioned at said touch-sensitive area, wherein a user may enter data that may be simultaneously displayed in said display area.

21.   The program product of claim 20 further comprising:

instruction means residing in a computer memory for analyzing physical characteristics associated with said user while said user is entering a particular sequence of data utilizing said touch-sensitive keyboard; and

means for configuring said touch-sensitive keyboard such that the sensitivity of said touch-sensitive keyboard may be raised or lowered according to said physical characteristics associated with said user, in response to analyzing said physical characteristics.

22.   The program product of claim 21 wherein each of said instruction means further comprises signal bearing media.